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LETTER REGARDING REGULATORY REVIEW AND COMMENTS ON FINAL DRAFT WORK PLAN FOR OPERABLE UNIT 3 (OU 3) NAS JACKSONVILLE FL
4/15/1994
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Florida Department of
Environmental Protection

Lawton Chiles
Governor

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3900 Commonwealth Boulevard
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Virginia B. Wetherell
Secretary

April 15, 1994

Commanding Officer
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, SC 29418

Attention: Mr. Joel Murphy, Code 1853

Subject: **Comments concerning Final Draft Operable Unit 3 Workplan**

Dear Mr. Murphy:

My comments/review of the **Final Draft Operable Unit 3 Workplan** generally focus on the underlying stratigraphy. Of chief concern are the Surficial and Intermediate Aquifer Systems.

Clearly, the current well data and sampling show contamination of the undifferentiated sand and clay sediments associated with the Surficial Aquifer System to be widespread and pervasive through out the area of investigation. Additionally, the well logs (PZ001-PZ027) show near surface lithologies to be highly variable with sands grading laterally into sandy clays and clays. Past studies (G@M,1986) have documented lateral clay discontinuities between cores. As a consequence, it is not surprising to find contamination in the underlying Hawthorn sediments via downward movement through permeable sediments.

Similarly, logs of the deeper borings which penetrated the upper 1/3 of the Hawthorn unit and associated Intermediate Aquifer System (SB001 and SB002), shows a highly diverse lithology (both horizontally and vertically)- including fine to medium grain size permeable sands as well as silty, clayey sands, silts and clays. For example, a comparison of units described as "clay" in these cores suggests that only one interval (approximately 129'-141') at or near the bottom of the core occurred at the same depth. This assumes the surface elevations of the respective cores to be equal (something that could not be determined from the log headings). This illustrates the discontinuous nature of lateral sediment facies (lithologies) within the Hawthorn and the need to more fully characterize lateral clay continuity through additional "ground truthing" by coring the deeper sediments especially in view of the

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level of contaminants found at deeper depths (Figure 3-3). Many of the clay units contain sand and/or silt and as page 2-37 line 8 states " much of the clay lens contains sandy clay indicating a

higher permeability and groundwater flow through the lens". There is certainly the potential for downward migration of contaminants via lateral movement along impermeable clay barriers and downward movement at permeable boundaries in a step-like manner.

The overall approach outlined in this final draft is quite comprehensive and should provide a more definitive characterization of contamination at this site. I am concerned that the high levels of contaminants present in the deeper sediments may migrate down into the lower Hawthorn or even the Florida Aquifer System.

Sincerely,

Ronald W Hoenstine

Ronald W. Hoenstine
Captain, USNR-R

RWH/rwh